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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,115	02/23/2004	Elliott K. Stava	LEEE 200393	7692
27885	7590	12/16/2005	EXAMINER	
FAY, SHARPE, FAGAN, MINNICH & MCKEE, LLP 1100 SUPERIOR AVENUE, SEVENTH FLOOR CLEVELAND, OH 44114			SHAW, CLIFFORD C	
			ART UNIT	PAPER NUMBER
			1725	

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/783,115	<b>Applicant(s)</b> STAVA, ELLIOTT K.	
	<b>Examiner</b> Clifford C. Shaw	<b>Art Unit</b> 1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>0223</u> . | 6) <input type="checkbox"/> Other: ____.  |

**Detailed Action**

1.) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.) Claim 33 is rejected under 35 U.S.C. 102(b) as being anticipated by Stava (6,501,049, cited by applicant). Figures 1 and 4 and the discussion thereof in the patent to Stava (6,501,049) disclose an electric arc welder operated to perform a short circuit welding process with features claimed, including: a pulse wave modulator associated with elements 234, 230, and 202; a first waveform generator at element 250; a second waveform generator at element 260; the first waveform includes a first slope shown immediately preceding point 32b in figure 1, a break point at 32b, and a second slope between 32b and 32c.

3.) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4.) Claims 1-32 and 34-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stava (6,501,049) taken with Hutchison et al.(6,087,626). Figures 1, 4-6 and the discussion

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thereof in the patent to Stava (6,501,049) disclose an electric arc welder with the features claimed, except: the limitations directed to constant arc parameters for the second waveform and more particularly, constant voltage, current, or power; and the limitations directed to the manually adjustable breakpoint circuitry. These differences do not patentably distinguish over the prior art. At the time applicant's invention was made, it would have been obvious to have provided the system of Stava (6,501,049) with constant parameter waveforms for the arcing portion of the short circuit process, the motivation being the teachings of Hutchison et al. (6,087,626) that constant parameters during the arcing portion of a short circuiting process are useful (see figure 3 in Hutchison et al.(6,087,626) and note that voltage and current are shown as constant during the arcing portion. Because voltage and current are constant, so too will power be). In regard to the claimed break point limitations, at column 8, lines 1-40 in Hutchison et al. (6,087,626), there is a discussion of using two different slopes for the short circuit waveform, these slopes being determined by the controller. At the time applicant's invention was made, it would have been obvious to have provided the system of Stava (6,501,049) with this type of slope control if the advantages thereof were desired. It is further considered obvious that the two slope values taught by Hutchison et al.(6,087,626) would be adjustable in some manner in order to accommodate different welding problems, thereby satisfying these claim limitations.

5.) The patents to Ogasawara et al. (4,546,234), Parks et al. (4,954,691), Parks et al. (5,003,154), and Stava (5,961,863) are cited to show prior art short circuiting process arc welders.

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Any inquiry concerning this communication should be directed to Clifford C Shaw at telephone number 571-272-1182. The examiner can normally be reached on Monday through Friday of the first week of the pay period and on Tuesday through Friday of the second week of the pay period.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas G. Dunn, can be reached at 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Clifford C Shaw  
Primary Examiner  
Art Unit 1725

December 10, 2005